

REMARKS

Claims 1-9, 11, 12, 14, 15, 17-19, 23, 25, and 27-43 were pending in this application. Claim 25 has been canceled. Claims 1-5, 8, 14, 15, 17-19, 29, 31, 33, 34, and 37-41 have been amended. New claims 44-65 have been added. Upon entry of the instant amendment and response, claims 1-9, 11, 12, 14, 15, 17-19, 23, and 27-65 will be pending.

Applicants thank the Examiner for the indication of allowability of claims 31 and 32.

Applicants respectfully submit that no new matter has been added. Support for the amendments to independent claims 1, 31, 33, 37, and 40, as well as dependent claims 53-65, regarding the size of the sub-fragment (*i.e.* less than 90%, 60%, or 30% of the length of said N2 sequence) may be found throughout the specification and claims as originally filed. In particular, support for these amendments may be found at least at page 10 (lines 20-24), page 11 (lines 16-18 and 27-30), Figure 2A, and Example 2. Support for the amendments to claims 4 and 8, as well as new claims 44-47, may be found in the specification as originally filed at least at page 14, line 25 through page 15, line 12.

Applicants have voluntarily amended claim 1 to recite “at least one peptide fragment” in order to correct an antecedent basis problem pertaining to the inconsistent use of the terms “fragment” and “peptide.” To maintain consistency throughout the claims, claims 1-5, 31, 33, 34, and 37- 41 have been similarly amended. Applicants have also voluntarily amended claim 1 to recite “...the RasGAP protein and which comprises...” as this is believed to improve the clarity of the claim. Claims 31, 33, 37, and 40 have been similarly amended.

Acknowledgment of Withdrawal of Certain Objections/Rejections

Applicants acknowledge and thank the Examiner for withdrawing the objection to claims 1-3, 31, 33, 34, and 40-41, as well as the rejection of claims 1-9, 11, 12, 14, 15, 17-19, 23, 25, 27-39, and 40-43 under 35 U.S.C. § 112.

Rejections Under 35 U.S.C. § 112 Maintained

The Examiner has maintained rejection of claims 23, 25, 37, and 40-43 under 35 U.S.C. § 112, 1st paragraph, on the grounds that the specification does not enable the full scope of the claims. Specifically, the Examiner has taken issue with the terms “preventing cancer” and “wherein the cancer is prevented.”

Applicants respectfully disagree with the Examiner’s position. However, to expedite prosecution, and not in acquiescence to the Examiner’s allegations that these terms are not enabled by the specification, Applicants have amended claims 25 and 40 to delete reference to these terms. Applicants respectfully submit that this rejection may now be withdrawn.

The Examiner has also maintained rejection of claim 37 under 35 U.S.C. § 112, 1st paragraph, on the grounds that it allegedly does not meet the written description requirement. Specifically, the Examiner has taken issue with the fact that the claim recites the phrase “or variants thereof.”

Applicants respectfully disagree with the Examiner’s position that the specification does not provide adequate written description for the term “or variants thereof.” However, to expedite prosecution Applicants have amended claim 37 to delete reference to this phrase. Applicants respectfully submit that this rejection may now be withdrawn.

Rejections Under 35 U.S.C. § 112

The Examiner has rejected claims 3-5 under 35 U.S.C. § 112, 2nd paragraph, on the grounds that they are allegedly indefinite.

With regard to claim 3, the Examiner has noted that the claimed peptide sequence refers to SEQ ID NO:1, which is directed to a nucleotide sequence. Applicants have amended claim 3 to specify that the claimed peptide sequence refers to SEQ ID NO:8 (see Table 1). Applicants respectfully submit that this rejection may now be withdrawn.

The Examiner has rejected claim 4 on the grounds that it allegedly does not further limit the scope of claim 1. Applicants respectfully disagree with the Examiner's position. Applicants note that one of skill in the art would understand that amino acids may occur in either the L-form, D-form, and/or retro-inverso form, as particularly noted in the specification on page 14 (lines 25-29), and that claim 4 does further limit claim 1 by specifying the D-form and/or retro-inverso form. However, to more clearly define the invention, and not in acquiescence to the Examiner's rejection, Applicants have amended claim 4 to clarify that at least one amino acid within the peptide may occur in D-form. Additionally, Applicants have deleted the phrase "and/or in a retro-inverso isomer form" in order to remove the "and/or" language and further clarify the claim. Claim 8 has been similarly amended in order to maintain consistency. The deleted subject matter has been moved to new claims 44-47, which further limit claims 4, 8, 1, and 7, respectively. Support for these amendments may be found in the specification at least at page 14, line 25 through page 15, line 12. Applicants respectfully request that this rejection be withdrawn.

The Examiner has rejected claim 5 (and claims 6-9, which depend from claim 5) because it recites the phrase "wherein said at least one peptide is conjugated to an agent which increases the cell accumulation of said at least one peptide." Applicants have amended claim 5 to recite "...wherein said at least one peptide is further conjugated to an agent..." as requested by the Examiner. Consequently, this rejection is believed to be overcome. Favorable reconsideration and withdrawal of the rejection is respectfully requested.

Claims 1-3, 11, 12, 27, 28, and 33-39 are Rejected Under 35 U.S.C. § 102

The Examiner has maintained the rejection of claims 1-3, 11, 12, 27, 28, and 33-39 under 35 U.S.C. § 102 on the grounds that they are allegedly anticipated by Yang *et al.*, as evidenced by Widmann *et al.* Specifically, the Examiner has stated

"Since Yang et al. teach the same composition (i.e. a composition comprising an N2 fragment containing WXWVXXRTX and a genotoxin such as cisplatin) as the claimed composition, the N2 fragment would inherently enhance the ability of the genotoxin to kill selectively cancer cells (emphasis added)."

Applicants respectfully traverse the rejection. Applicants respectfully submit that claim 1 is directed to “...at least one peptide fragment of the N2 sequence of the RasGAP protein (emphasis added)...” whereas Yang *et al.* discloses the “Fragment N2.” Applicants believe the Examiner may have confused the terminology of claim 1 with that of the cited reference. The Fragment N2 of the cited reference (see *e.g.* page 5348, Fig. 1E) refers to the N-terminal fragment of RasGAP that spans amino acid residues 158-455. In contrast, the “...at least one peptide fragment of the N2 sequence of the RasGAP protein (emphasis added)...” refers to a sub-fragment of the Fragment N2 disclosed in Yang *et al.* As the Examiner is likely aware, a rejection based on inherent anticipation of a composition can be made only in cases where the claimed composition is identical to the composition disclosed in the art. See MPEP 2112.01(II) (“...if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present...(emphasis added)”). In other words, inherent anticipation cannot exist in situations where the prior art teaches a different chemical structure. The instant application illustrates the reasons behind MPEP 2112.01(II) perfectly. For example, full-length RasGAP contains the same SH3 domain as Fragment N2, and yet full-length RasGAP does not sensitize cells to genotoxin-induced apoptosis (see *e.g.* Figure 7A and figure 7F of Yang *et al.*), indicating that the sub-fragment has different properties than the parent fragment. Similarly, Applicants respectfully submit that the Fragment N2 disclosed in Yang *et al.* cannot inherently anticipate the claimed sub-fragments because they are, by definition, not identical to the Fragment N2, and therefore do not inherently possess the same properties. Nevertheless, Applicants have amended claim 1 to further clarify and define the fact that the claimed peptide is a sub-fragment. In particular, claim 1 has been amended to recite “...wherein said at least one peptide fragment is less than 90% of the length of said N2 sequence...” Independent claims 31, 33, 37, and 40 have been similarly amended. Support for these amendments may be found in the definition of the term “fragment” on page 10, lines 20-24, of the specification as originally filed. Applicants respectfully request that this rejection may be withdrawn.

CONCLUSION

In view of the above remarks, Applicants believe that the application is in condition for allowance. The Examiner is request to contact the undersigned for discussion of the above, if deemed appropriate. The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 12-0080, under Order No. KZY-004US.

Dated: September 20, 2010

Respectfully submitted,

By: Debra J. Milasincic, Esq./
Debra J. Milasincic, Esq.
Registration No.: 46,931
LAHIVE & COCKFIELD, LLP
One Post Office Square
Boston, Massachusetts 02109-2127
(617) 227-7400
(617) 742-4214 (Fax)
Attorney/Agent For Applicant